

**Air Canada Regional Jet Accident
Fredericton, New Brunswick
12/16/1997**

**Presented By:
Captain Brian Boucher
Air Canada**

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On December 16, 1996 an Air Canada Regional Jet departed Toronto on a regular scheduled flight to Fredericton at 21:34 GMT. The weather on arrival was reported as 30meters overcast 800 meters visibility. The approach in use was an ILS to runway 15. The approach ban into Fredericton was 60 meters 1000 meters visibility. The only approach on this runway was a category one. The first officer was flying the leg that evening and the Captain was also current as a Line indoctrination training Captain. The aircraft was flown down to 10 meters when the Captain ordered the First Officer to execute a missed approach. The aircraft pitched normally to 10 degrees when all of a sudden the aircraft aerodynamically stalled, fell to the runway, and then veered right of the runway at full power. After traveling 700 meters across the infield, it finally came to a rest against a large Hemlock tree at 2348 local time. There were 39 people on board and three crewmembers. 9 passengers were critically injured and the others received minor to no injuries.



The approach was flawless down to 50 meters. The first officer decided to disconnect the autopilot early and it was at that point that the aircraft began to go slightly above the glide slope. The Captain advised his F/O that he was high and to pitch the aircraft down twice. At approximately 30 meters the First Officer reduce the thrust setting to idle and the aircraft continued to descend. At 10 meters, the Captain saw the airplane now slightly left of the runway and decided to go around. He ordered a go around and the first officer applied full power, pitched the aircraft to 10 degrees. The aircraft stalled and the right wing struck the ground approximately 900 meters down the runway and 10 meters left of the centerline.

The aircraft struck the ground with its nose, shearing the nose gear off. The right wing slammed the runway with great force ripping the winglet apart. The engines were still at full power with the Captain unable to grasp the thrust lever to idle. The aircraft plowed through the snowy field until it a drainage ditch parallel to and about 70 meters from the runway. The aircraft became slightly airborne continuing in a slight right arc for another 300 meters until it hit a one meter Hemlock tree.



The aircraft remained generally intact with no damage to the empennage. The wings were still attached to the fuselage but there was major damage to the L1 door caused by the Hemlock tree as it entered the fuselage. As the aircraft moved forward, the tree cut through the aircraft cabin nine feet aft of the L1 door. The other damage to the aircraft was the right winglet, which detached just before the aircraft stopped moving. There was heavy damage to the Electrical compartment in the nose area.



When the aircraft finally stopped moving, the Captain asked for the severe aircraft damage drill checklist. As they completed the checklist, it became apparent that both engines were still at full power and they were initially unable to shutdown the left engine because the thrust lever was impaired. Meanwhile, the passengers were getting instructions from the in charge F/A to start evacuating the aircraft. Fortunately the right engine shut down by itself as the passengers exited the right overwing exit. The left engine continued to run at full power even after the fire switches were pushed. It was only after the Captain put his foot on the instrument panels and applied all of his strength, that he was able to shut down the left engine.



There was a deadheading Flight Attendant who quickly exited the right side of the aircraft as shown and then assumed a leadership role. She assembled all the passengers who exited the right side and stopped them from re-entering the aircraft because the aircraft engine was still running. After the Captain shut down the engine, the F/A reentered the cabin to get the coats that the passengers left behind. The on duty F/A then gathered all of the ambulatory passengers and

started walking towards the runway because the rescue people had not arrived on the scene. When the F/A reached the active runway, they were met by a maintenance foreman and an on duty RCMP Officer who transported them to the terminal. Back at the aircraft, there were still 8 passengers that needed to be extricated. The Captain tried to extricate one passenger who was pinned by his seat using his pry axe, but it was rendered unserviceable almost immediately. All they could do was to treat the passengers for shock, keep them warm until the Fire Department arrived.

Emergency Response

The Fredericton Airport is uncontrolled and information is passed on to the pilots from a flight service station attendant. This person is normally in a room located at the airport but not always located in a room where he would have a clear view of the runways. That evening the FSS attendant heard AC 646 fly by and assumed that he had landed. When the aircraft is on the ground, the pilots will call clear of the runway and taxi at his discretion to the terminal. No call came from 646 so the FSS starting calling at 2348. After getting no response, the FSS called the only firefighter on the field. The crash truck responded onto the runway and proceeded very slowly because the visibility was so bad. He met up with the maintenance foreman and continued slowly down runway 15 looking for signs of the aircraft. Ironically the only other firefighter had left early at 2230 due to sickness that day.



At 2358, the FSS activated their emergency plan. It was approximately 14 minutes after the crash when the only firefighter and maintenance foreman came upon some of the passengers on the runway. With the help of service vehicles and the RCMP police vehicle, the passengers were brought to the terminal building for assessment. Shortly there after, the firefighter who went home early returned to the airport to assist a rescue and possibly drive their RIV to the crash site. Unfortunately the truck traveled about 10 meters before it got stuck in the deep snow. The decision was then made to bring a snow blower to the site. It was a difficult task to make this road because of all the debris left from the path of 646. Slowly but surely they were able to make this access road.

At 23:30 more emergency help from the local municipal fire department and the Canadian Forces Base in Gagetown arrived to help. There was never any fire, but for safety reasons a handling was stretched from the RIV to the aircraft. Shortly after arriving at the scene, extrication efforts were underway. There were seven passengers that were trapped by their seats collapsing around them and needed to be extricated, but the heavy hydraulics that was brought into the aircraft was just too cumbersome. Small hand tools were seriously needed to get the job done. Two hours and forty-six minutes later, the last passenger was extricated and ambulated to the hospital in critical condition.

